

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**RESIDUE MANAGEMENT, SEASONAL**

(Acre)

CODE 344

**DEFINITION**

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface during part of the year, while growing crops in a clean tilled seedbed.

**PURPOSES**

This practice may be applied as part of a conservation management system to support one or more of the following:

- Reduce sheet and rill erosion.
- Reduce wind [erosion](#).
- Manage snow to increase plant available moisture.
- Provide food and escape cover for wildlife.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to all cropland and other land where crops are grown.

This standard includes residue management methods practiced during the part of the year from harvest until residue is buried by tillage for seedbed preparation.

**CRITERIA**

**General Criteria Applicable to All Purposes Named Above**

Loose residue to be retained on the field shall be uniformly distributed on the soil surface. Where combines or similar machines are used for harvesting, they shall be equipped with spreaders capable of redistributing residues over at least 80 percent of the working width of the header.

Residues shall not be burned.

**Additional Criteria to Reduce Sheet and Rill Erosion**

The amount of residue needed to reduce erosion within the soil loss tolerance (T) or any other planned soil loss objective, shall be determined using current approved erosion prediction technology. Partial removal of residue by means such as baling or grazing, shall be limited to retain the amount needed. The remaining residue shall be maintained on the surface through periods when sheet and rill erosion has the potential to occur, or until planting, whichever occurs first. Calculations shall account for the effects of other practices in the conservation management system.

[Tillage operations](#) that occur during the management period shall be limited to methods which leave residue on the surface and maintain the planned cover conditions.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

NRCS-VT  
JULY 2002

### **Additional Criteria to Reduce Wind Erosion**

The amount of residue needed to reduce erosion within the soil loss tolerance (T) or any other planned soil loss objective, shall be determined using current approved wind erosion prediction technology. Partial removal of residue by means such as baling or grazing, shall be limited to retain the amount needed. The remaining residue shall be maintained on the surface through periods when soil erosion by wind has the potential to occur, or until planting, whichever occurs first. Calculations shall account for the effects of other practices in the conservation management system.

[Tillage operations](#) that occur during the management period shall be limited to methods which leave residue on the surface and maintain the planned cover conditions.

### **Additional Criteria to Manage Snow to Increase Plant Available Moisture**

Stubble shall be left standing as high as possible by the harvesting operation, but not less than 6 inches in any case. Stubble shall [remain](#) standing over winter to trap and retain snow. Loose residue may be removed providing that the remaining residue is left standing.

[Tillage operations](#) that occur during this period shall be limited to undercutting tools such as blades, sweeps, or deep tillage implements such as rippers or subsoilers.

### **Additional Criteria to Provide Food and Escape Cover for Wildlife**

[Residue height, amount, and time period](#) necessary for meeting habitat requirements for the target species or wildlife population shall be determined using an approved habitat evaluation procedure.

Residues shall not be removed unless it is determined by the habitat evaluation procedure that such removal will not adversely affect habitat values.

Tillage shall be delayed until the end of the management period to maintain the food and cover value of the residue.

## **CONSIDERATIONS**

Excess removal of plant residue by baling or grazing often produces negative impacts on resources. These activities should not be performed without full evaluation of impacts on soil, water, animal, plant, and air resources.

Production of adequate amounts of crop residue necessary for the proper functioning of this practice can be enhanced by selection of high residue producing crops and crop varieties [in the rotation](#), by the use of cover crops, and adjustment of plant populations and row spacings.

When planting on a clean seedbed, exposure to erosion can be minimized by completing tillage and planting in a single operation, or by performing primary tillage no more than three days before planting.

When planting on a clean seedbed in areas with limited moisture, moisture for germination can be increased by completing tillage and planting in a single operation, or by performing primary tillage no more than three days before planting.

The effectiveness of stubble to trap snow increases with stubble height. Variable height stubble patterns may be created to further increase snow storage.

The value of residue for wildlife habitat can be enhanced by leaving rows of unharvested crop standing at intervals across the field.

## **PLANS AND SPECIFICATIONS**

Specifications for establishment and operation of this practice shall be prepared for each field, [crop and crop year in the rotation to meet the stated purpose](#).

Specifications shall be recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable methods.

## **OPERATION AND MAINTENANCE**

No operation and maintenance requirements, national in scope, have been identified for this practice.